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AN INQUIRY INTO THE CAUSES OF THE INCREASED DEATH-RATE OF BOSTON AND ITS SUBURBS IN 1872 AND 1873.¹

BY M. B. LEONARD, M. D., OF EAST BOSTON.

THE ratio of mortality in East Boston for the year 1871 was 15.6 per 1000 inhabitants. For the year 1872 it was 28.6 per 1000, an increase of 13. If the deaths from small-pox in the latter year be deducted, the deaths from other diseases give a ratio of 27.61. This remarkable increase in the death-rate, in the absence of any epidemic to account for it, led the writer to go over the record of mortality as far back as reliable statistics were accessible, to ascertain whether such marked variations had occurred in our previous history. The following table will give the result of this investigation, showing the population of East Boston, with the semi-decennial rate per cent. of increase, and the number of deaths and ratio per 1000 inhabitants for each year from January 1, 1850, to January 1, 1875.

TABLE I.
Population and Death-Rate of East Boston.

	Popu- lation.	Average Annual Increase per cent.	Number of Deaths.	Ratio per 1,000.	Annual Average for Five Years.		Popu- lation.	Average Annual Increase per cent.	Number of Deaths.	Ratio per 1,000.	Annual Average for Five Years.	Deaths from Typhoid Fever.
1850	9,851		224	22.7		1863		413	20.5			
1851			281	28.3		1864		452	22.2			
1852			276	22.4		1865	20,568	1.25	447	21.7	20.13	
1853			338	25.		1866		382	17.2			
1854			362	24.3	23.94	1867		445	19.7			14
1855	15,963	12.4	376	23.5		1868		508	21.1			17
1856			375	22.5		1869		472	19.3	19.8		19
1857			328	18.9		1870	25,484	4.78	513	20.1		24
1858			332	18.4		1871		414	15.6			19
1859		4.24	317	16.9	20.04	1872		790 ²	28.6			24
1860 ¹	19,356					1873		610 ⁴	21.3			31
1861 ³						1874		537	18.1	20.74		
1862			352	17.7								

¹ Registrar made no report.

² Registrar made no report.

³ Small-Pox, 25.

⁴ Small-Pox, 16.

The above table shows the following facts: —

First, that between the years 1850 and 1870 the greatest difference

¹ Read before the Suffolk District Medical Society, January 30, 1875.

in the death-rate of any two consecutive years was between 1865 and 1866, when it was 4.5.

Second, that the highest ratio, 25.3, was in 1851, and the lowest, 16.9, was in 1859; the difference is 8.4.

Third, that the highest average for five years was from 1850 to 1855; and the lowest from 1865 to 1870.

Fourth, that the average mortality was greater during the war than in the five years preceding and following it.

Fifth, that since 1870 some unusual cause has exerted a marked influence upon the health of the citizens of East Boston.

It will be observed that in 1870 the death-rate did not differ materially from the average of preceding years. The following year it fell 4.5, and in 1872 it rose 13, — the former being lower and the latter higher than in any preceding year. In 1873 it fell 7.3 and in 1874 3.2. In 1850 the city had but fairly commenced the construction of sewers in East Boston, and it was several years before our drainage system was sufficiently perfected to give most of our dwellings good drainage, and to remove nuisances from the vicinity of many of them. The large mortality before 1856 was probably due to this want of sewerage. Concerning the period from 1856 to 1870 there seems to be nothing worthy of special remark, except this: that the theory which claims that, since a large percentage of the mortality of Boston is of children, the death-rate during the war would be less, there being fewer marriages and fewer births, seems not to be verified in East Boston.

Our citizens received their water supply from 1851 to 1870 from Lake Cochituate. The great fluctuation in the death-rate since 1870 cannot be attributed to bad drainage or local nuisances or epidemics, as there has been no material change in our drainage, or in the number of nuisances abated, and no diseases have prevailed in an epidemic form. There seems, however, to have been an increase of most if not all the ordinary diseases during those years when the ratio has been large. The quality of the water supply has been variable, and the death-rate seems to have risen as the impurities in the water increased, and to have fallen as they decreased. In 1870 the quality of the water was neither very good nor very bad; in 1871 it was good most of the season; in 1872 it was at times offensive to sight, taste, and smell; the following year it was considerably better, and last year it was still further improved. The question arises, What should occasion these variations in the quality of the water supply? Since January 1, 1870, our supply has been from Mystic Lake; and those who are conversant with these waters are aware that between twenty and thirty large tanneries, two glue factories, and one chemical manufactory, besides several other mechanical establishments, discharge their refuse into the lake or its tributaries. In addition to these, the waters receive the

sewage of many houses. The greater part, however, of this refuse and sewage is discharged into brooks, which in dry seasons like the summer of 1871 and of 1874 do not flow; most of this very objectionable matter is then withheld from the lake, and the water supply is greatly improved. On the return of heavy rains the large accumulations of noxious materials are washed into the lake, and the result is shown in the above table. The effect of the drought of 1871 was such as to lead to the destruction of a large number of fish that ventured near the head of the lake.

These facts, which point so significantly to the water supply as the cause of our variable death-rate, made the examination of the death-rate of other cities receiving their supply from the same source a subject of much interest. The result will be found in the following table.

TABLE II.
Number of Deaths and Ratio per 1000 since 1870.

	1870.		1871.		1872		1873.		Average Ratio.
	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	Deaths.	Ratio.	
Charlestown	743	27.5	630	21.9	767	26.3	833	28.2	25.9
Somerville	259	17.6	342	21.1	400	22.5	425	21.1	20.5
Chelsea	332	17.9	345	17.7	416	20.3	455	21.3	19.3
Total	1337	22.01	1317	20.5	1583	23.8	1713	24.8	22.77
East Boston	518	20.1	414	15.6	730	28.6	610	21.3	21.4
Small-Pox					25	1	16		
With Small-Pox deducted					765	27.6	594	20.7	
Boston, Wards II. to XVI.	5585	24.8	5474	23.9	7300	31.49	7259	30.8	27.74
Small-Pox					713	3.04	286	1.2	
With Small-Pox deducted					6587	28.41	6973	29.6	26.67

Note. The high death-rate in Charlestown indicates that there are causes influencing the health of the citizens that do not exist in other cities supplied by Mystic water.

For convenience in comparing I have included East Boston, and Wards II. to XVI. (inclusive) of Boston (being the whole territory receiving its supply from Lake Cochituate prior to 1874), in the same table. An examination of this table will show that the death-rate of Charlestown in 1870 was 7.4 more than that of East Boston; in 1871 it was 6.3 more; in 1872 it was 4.8 less; in 1873 it was 6.9 more: average for the four years 4.5 in favor of East Boston.

The aggregate ratio of the three cities included in the first part of the table was, in 1870, 1.91 more than that of East Boston; in 1871, 4.9 more; in 1872, 4.8 less; in 1873, 3.5 more: average for the four years 1.37 in favor of East Boston.

If the great variations in the death-rate in East Boston were occasioned by variations in the quality of the water, the question arises, Why were not the variations, although large in those cities, as large as

they were in East Boston? Those cities use cement pipes, and it is claimed that no crusts form in them, and that by use they become smooth, like glass; consequently, it is easy to remove the deposits in them by flushing. The water-works of those cities, furthermore, are under the supervision of the Mystic Water Board. The writer has been informed that in the spring and fall of 1872 the pipes in those cities were flushed, as is their custom every year.

The street pipes in East Boston, on the other hand, are of iron, and many of them have been in service for more than twenty years, and are much roughened by tubercles and incrustations, which would make it difficult, if not impossible, to free them from deposits. These pipes are under the charge of the Cochituate Water Board, and for some reason they were not flushed in 1870, although the attention of the board was called repeatedly to the condition of the water.

As East Boston is at the end of the system, the strong current, as it passes through Somerville, Charlestown, and Chelsea to reach us, would naturally bring with it a large percentage of the deposit, causing our pipes to become so filled that at times we could not draw water without its containing considerable sediment of an offensive smell and taste. In the spring of 1873 a large delegation had a formal hearing before the Cochituate Water Board, to urge the adoption of immediate measures to improve the quality of our water. This led to the flushing of the pipes, and a consequent improvement in the water; our death-rate fell that year 7.8. The drought in 1874 has resulted in the withholding of a large portion of the very objectionable matter entering the water supply in Woburn and Winchester. This, together with the better care given the street pipes, has reduced our death-rate 3.2 more, making it 18.1.

A table giving the number of deaths from each of the diseases, for each year, and extending back five or ten years, would be both interesting and instructive, but its preparation from the record as now kept would require more time than the writer could give, and he has felt obliged to satisfy himself with the date of each death from typhoid fever, the age of the decedent, and the street and number where the death occurred, from 1867 to 1873 inclusive. It will be observed that the number has increased out of proportion to the increase of the population, since the introduction of Mystic water, and that in 1873 the number was seven more than in any preceding year, notwithstanding the large decrease in the general death-rate. The point of most interest in this inquiry is, however, the fact that the deaths were not limited as to locality, but were quite evenly distributed over the island. Some years there were more upon the highlands, where the drainage is apparently good; in others, the excess was upon the flats. This fact is important, inasmuch as it indicates that our variable death-rate is not

due to local causes, but to some general cause which affects every part of the ward. There were many deaths from diseases of the bowels in 1872, but not a sufficiently large number to account for the great increase in the mortality that year. Such a table as has been referred to above would be valuable, as it might indicate whether the mortality from other diseases than typhoid fever and diseases of the bowels might be influenced by impure water. The medical commission in their recent report¹ say, "It will be seen that, though the total number of deaths in the city was 37.4 per cent. greater in 1872 than in 1871, yet the percentage increase of those diseases which *may* be produced by impure water was less than that of diseases supposed not to be so produced. In other words, though the death-rate in the city was remarkably high in 1872, this great mortality cannot justly be attributed to any unusual impurity of the drinking-water."

Does any one doubt that the use of food, or the breathing of air, contaminated with decomposing organic matter, would increase the mortality from many, if not most diseases? Would our ambitious young physicians seek for dispensary practice if they did not suppose that the bad food and bad air of their patients would give an excellent opportunity to study a great variety of diseases in their worst forms?

If the food and air to which many of the poor in our large towns are doomed bring upon them a variety of diseases in an aggravated form, why should not drinking water containing the same kind of impurities have a similar influence? It is well known that the only effective remedy for many of the sick poor is a change of food and air. Within the past two and a half years the writer has found that the only effectual remedy for some patients, who were not poor, was a change of water. A few are so sensitive to it that one glass of Mystic water is sufficient to bring on an attack of diarrhœa, and consequently they are obliged to have their water boiled before drinking it. Many others find the same expedient effectual in relieving impaired digestion, and in removing some of the urinary deposits which had resisted medication.

Water rendered impure by the discharges or the secretions of those suffering with typhoid fever, or cholera, or other of the zymotic diseases, is likely to cause an epidemic of these diseases among those who drink the water. What influence water has when it contains the discharges and secretions of consumptive patients, and of those suffering from many other diseases, is not now definitely known. Neither is it determined concerning the diseases which decomposing animal and vegetable matter in a water supply will induce.

The following table gives the excess of deaths for each month in the year 1872 over the corresponding months of the previous year, and shows conclusively that the death-rate of Boston also varies with the quality of the water supply.

¹ City Document 102, 1874, page 46.

TABLE III.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1872.....	650	401	656	573	623	592	930	814	707	698	679	788
1871.....	445	458	493	433	471	395	732	610	500	441	419	476
Excess in 1872.....	65	33	188	139	152	187	258	244	207	197	260	312

In the last report of the State Board of Health,¹ Professor Nichols says that "the water as received in Boston during the years 1872 and 1873 has been more strongly colored, and otherwise less pure, than in the two preceding years" (which was as far back as his observations extended). Farther on he says, "That the introduction of the Sudbury River has contributed somewhat largely" (i. e., to the increase of organic matter in the water supply), "there can be no doubt."

Sudbury River was turned into Cochituate Lake June 28, 1872, and it will be observed that the mortality was considerably greater than that of the previous year, and of the previous part of that year for the balance of the year. The small-pox epidemic was raging in November and December, and probably accounts in part for the large excess in those months. The committee appointed by the Board of Health to report the causes of the large mortality in Boston for the last two years will probably be able to show us whether the increased impurity of the water was a cause or only a coincidence. The facts I have been able to obtain indicate that it is one if not the sole cause for the large increase of the death-rate. These facts show that there should be no delay in the construction of sewers to divert the very objectionable matter from our water supplies.

The small death-rate in East Boston in 1871 (15.6) and in 1874 (18.1), when only a portion of the sewage and refuse of the twenty or thirty tanneries was withheld from the lake, proves the natural waters of the lake to be excellent; and we may confidently predict a good record every year, should this objectionable material be permanently diverted. If this were done, and sufficient storage were added, the Mystic waters would prove a valuable acquisition to the water supply of Boston. The aggregate area of the Cochituate and Mystic water-sheds is forty-six square miles, and in seasons of ordinary rain-fall would yield forty-six millions of gallons daily; at an estimated cost of two hundred and ten thousand dollars, Stevens's Brook, with an area of about four square miles, together with a large storage basin, can be added to the Cochituate, and secure a supply of seventeen millions of gallons daily from that source. And by the construction of proper storage basins in the Mystic basin that source will supply about twenty millions of gallons in dry seasons.

The aggregate population of the towns that now receive, or hereafter may look to those sources for a water supply, was in 1870 340,885, as

¹ Page 122.

will be seen by Table IV. Tables V. and VI. give the actual growth and rate per cent. of increase of the towns and wards in both the Mystic and the Cochrutane districts from 1865 to 1870. There is good reason to doubt whether either of the districts has grown more rapidly since 1870 than for the five years previous. So far as relates to the Mystic,

TABLE IV.

		1870.	Annual Increase per cent.	1875.	Assumed annual increase between 1875 and 1880.
Aggregate of Mystic District Wards II. to XVI inclusive, Co- chrutane District		102,193	4	122,531	4,901
Ward XVII., Cochrutane District	225,042		1.5	241,997	3,628
Ward XIX., Cochrutane District	8,683		5	10,853	542
Aggregate of Cochrutane District	4,967	238,692	5	6,208	310
Sum total of the two districts .		340,885	2.38	331,512	9,381

TABLE V.

	Population, 1865.	Population, 1870.	Increase, five years.	Increase, one year.	Annual Increase per cent.	Annual increase per cent. assumed since 1870.
Charlestown	26,399	28,323	1,924	384.8	1.45	1.41
Somerville	9,353	14,585	5,232	1046.4	11.4	10
Chelsea	14,403	18,547	4,144	828.8	5.75	5
East Boston	20,568	25,484	4,916	983.2	4.78	4
	70,723	87,039	16,316	3263.2	4.61	4

TABLE VI.

Boston.	Population, 1865.	Population, 1870.	Increase, five years.	Increase, one year.	Increase per cent.	Increase per cent. assumed since 1870.
Wards II. to XVI. inclusive	210,863	225,042	14,149	2,829.8	1.34	1.5
Ward XVII.	6,912	8,683	1,771	354.2	5.12	5
Ward XIX.	3,854	4,967	1,113	222.6	5.77	6
	221,659	238,692	17,033	3,406.6	1.53	1.7

the indications are that it has grown less rapidly, and I have assumed it to be less, 4 per cent., the same rate assumed by the engineers. For the five years prior to 1870, the growth of Wards II. to XVI. inclusive was only 1.34 per cent. annually. Including Wards XVII. and XIX. it was 1.53 per cent. So much has been said of the growth of these wards that I have assumed it to be since 1870, for Wards II. to XVI. inclusive, 1.5 per cent., and for Wards II. to XIX. inclusive 1.7 per cent. The engineers estimate the growth at 3 per cent. They do not, however, explain why the laws which have governed the growth of Boston and its suburbs are to be so modified since 1870. They seem to quite overlook

the fact that so long as Boston is a commercial city, so long Boston harbor will be the centre of its business, and its growth will be around the harbor. The population of the whole territory now belonging to Boston was in 1865 268,626; and in 1870 292,499; the annual percentage of increase for that period was therefore 1.77. It is probable that the population of Boston, including all the annexed territory, does not exceed 320,000. Probably it does not reach that number.

These figures show that unless the growth has been considerably more rapid since 1870 than it was for the five years previous, twenty-four millions of gallons will give each inhabitant more than sixty gallons daily; and that the estimated increase of population in both districts (9181) would require an annual additional supply of less than three fourths of a million gallons daily. The above facts and figures have led the writer to the following conclusions:—

First, that the present sources, if fully developed, will give Boston and the towns dependent upon them an ample supply of water for ten or fifteen years to come.

Second, that the impurities in our water supplies have increased the death-rate of Boston in the years 1872 and 1873. It is this conviction that led the writer, while chairman of the committee above referred to, to urge upon those having the water supply under their charge to purify and develop their present sources before expending large sums to obtain an additional supply from another source.

To make Boston a large and prosperous city, it must be made a healthy city; to make it healthy, the causes of disease must be found and removed; to find the causes, we must be guided to our conclusions by facts, and not by theories, or opinions, or the wishes of interested parties; and to obtain facts, the city should be divided into permanent health districts, and accurate statistics of population and mortality should be tabulated every five years, when the taking of the census would make it possible to form accurate conclusions.

AN UNUSUAL CASE OF HERPES ZOSTER OPHTHALMICUS.

BY O. F. WADSWORTH, M. D.,

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It has been laid down as a clinical rule, and never to my knowledge contradicted,¹ that when the whole side of the nose is involved in herpes zoster the eye does not escape. The explanation is found in the fact that the same nerve (naso-ciliary) which supplies the skin of the lower

¹ When this case was reported at the meeting of the American Ophthalmological Society, July 18, 1874, Dr. Matthewson of Brooklyn spoke of a similar case which he had observed. Dr. Matthewson's case may be found in the Transactions of the society, 1874, p. 228.

part of the nose and the nasal mucous membrane supplies also the long root of the ciliary ganglion and the long ciliary nerves, and so the cornea and iris.

The following case forms an evident exception to the rule. The eruption was present to the tip of the nose, yet the eye escaped.

A little girl, four and a half years of age, suffering from an attack of herpes zoster ophthalmicus, was referred to me at the Boston Dispensary by Dr. F. B. Greenough, November 14, 1873. The mother stated that she had first noticed complaint of pain, and soon after a "pimple" at the root of the nose, about a week before.

When I saw the patient, there were numerous rather deep ulcerations, some of them covered with thick crusts, from beneath which pus oozed. The ulcerations were situated on the right side of the forehead and front part of the hairy scalp, the upper lid, and the whole side of the nose to the tip. The upper lid was swollen and closed. On raising it with an elevator the conjunctiva of the globe was found much congested, but without chemosis; the cornea and iris were clear and bright. There was no affection of the nasal mucous membrane.

The mother did not bring the child with any regularity, and I saw her only once again during the course of the disease, about a week later. The condition of the skin was a little better, the lid still swollen, the cornea and iris normal.

The first part of April, 1874, I visited the child at her home. There were large cicatricial pits on the right side of the forehead and root of the nose; rather smaller and more shallow ones, but still marked, on the upper lid and extending down the side of the nose to the end. The eye was perfectly normal in appearance. The mother said the whole duration of the disease was about three weeks.

It was impossible to obtain the history of the case with accuracy, on account of the youth of the patient, the ignorance of the mother, and her neglect to bring the child as directed. Still the fact of a well-marked eruption of herpes zoster to the end of the nose, without affection of the eye, was established.

The mucous membrane of the nose was also unaffected. The latter circumstance, together with the absence of lesion of the eyeball, would go to show that the naso-ciliary nerve was not involved; and, assuming this to be the case, the presence of the eruption on the side of the nose may be readily accounted for by the supposition of an anomaly of nerve distribution. This supposition is probably correct; variations in the distribution of sensitive nerves are common, and Professor Turner has reported¹ just such a variation as would be required here: "The frontal nerve gave origin to a long, slender, infra-trochlear branch, which passed below the pulley of the superior oblique muscle, to be distributed along with the infra-trochlear branch of the naso-ciliary nerve."

¹ Journal of Anatomy and Physiology, November, 1871.

RECENT PROGRESS IN OBSTETRICS AND GYNÆCOLOGY.¹

BY W. L. RICHARDSON, M. D.

GYNÆCOLOGY.

Vascular Growths of the Urethra.—Dr. C. H. F. Routh reports² several cases of carunculæ of the female urethra. The disease is usually confined to the external meatus urinarius, where little red, mulberry-like growths, varying in size from that of a pin's head to that of a hazelnut, are to be seen surrounding the opening. In consistence they vary from a mere pulp to a marked induration. In many cases, where no such tumors are to be seen on a superficial examination, they will be found lying within the urethra itself. They are the seat of exquisite pain, and are accompanied with most agonizing dysuria. Not unfrequently they are the cause of an existing vaginismus. The growth itself is insensible. The mucous membrane, on which these tumors grow, is the sensitive part, since a microscopic examination of the diseased tissues shows an absence of all nerve elements. Occasionally a muco-sanious discharge, which is somewhat offensive, is seen. The disease is most commonly met with among middle-aged females. It is not so frequent among women of acknowledged imprudent habits as among those who are prudent, cleanly, and continent. Removal of the tumor, with cauterization of the bleeding surface, is the best method of treatment. In cases where there is fear of hæmorrhage, the growth may be transfixed and ligated.

Uterine Sarcoma.—After giving a complete history of six cases, previously reported by Professor Spiegelberg, Dr. Kunert gives³ the following résumé of the chief points in the pathology, course, diagnosis, and treatment of this affection. The disease has never been known to occur before puberty. Its progress is rapid, and terminates fatally. Dr. Winkel cites one case of a reported cure. Carcinoma of the body of the uterus is very rare, and sarcoma is easily distinguished from carcinoma of the cervix whenever débris of the tumor can be found in the vaginal discharges. Hæmorrhage and pain occur early in the course of the disease, while immobility of the uterus is found later. The alteration in the general condition of the patient is the first symptom which usually excites suspicion as to the true character of the disease. As regards treatment, removal is the best course to be pursued. Where this cannot be done, resort should be had to injections of carbolic acid, perchloride of iron, iodine, caustic potash, or to the use of the actual cautery.

Dr. Thomas advises, in a paper read before the New York Obstetrical

¹ Concluded from page 199.

² Obstetrical Journal of Great Britain, December, 1874.

³ Archiv für Gynäkologie, vi. 1.

Society, the entire removal of the growth by galvano-cautery, écrasement, excision, or the curette, and the cauterization of its base with chemically pure nitric acid. In cases where the os is closed it should be first dilated by sponge tents. In rare cases the growth terminates the patient's life rapidly; but it has frequently been known to last four or five years. Death is due to hæmorrhage, septicæmia, spread of the disease to neighboring abdominal viscera, disturbance of nutrition, or peritonitis. As a rule, Dr. Thomas does not consider that pain is a constant or early symptom of the disease.

Incision of the Cervix Uteri.—Prof. R. Olshausen¹ divides dysmenorrhœa into three varieties, according as its origin may be considered obstructive, congestive, or ovarian. Incision of the cervix uteri is to be used only in that class of cases, small in number, where the dysmenorrhœa is dependent upon the small size of the external os. In cases where either the internal os or the cervical canal is found to be narrowed by some lesion of the lining mucous membrane, the cervix uteri should never be incised. In all cases where the sound enters the uterine cavity suddenly, as if passing some contracted spot, whether that contraction be owing to disease or is the normal condition of things, an incision should be made. Wherever sterility is found to exist with mechanical dysmenorrhœa, there is always a pathological contraction of the external os. In those cases in which we are attempting the removal of sterility the external os may be incised, even though it appear to be normal. It is a well-known fact that the dilatation of the os, as occurs in labor, is favorable to a subsequent conception, since many women, who have been sterile for a long time, give birth to a number of children rapidly after the birth of the first child.

The best instrument to be used in performing incision is Sims's blunt-pointed bistoury. The blade should in all cases be passed as high up as it is desirable to make the incision, and the cut should be made from above downwards. The instrument should then be withdrawn, and the opposite side cut in the same manner. It is very important that the external os should be so deeply cut as to leave an open slit. The lips are then to be kept apart by tearing any adhesions which may form every twenty-four or forty-eight hours, and a solution of the perchloride of iron should be subsequently applied. Sponge tents should never be used, since they are liable to produce septicæmia. The operation should never be performed if there is any inflammatory process going on in the neighborhood of the uterus.

In those cases where there is anteflexion of the uterus, accompanied by sterility, a good result seldom follows the ordinary lateral incisions. In these cases a wedge-shaped piece should be cut out of the anterior lip. The bilateral incision of the os uteri is recommended in all severe

¹ Volkmann's Sammlung klinische Vorträge, 67, 1874.

cases of uterine catarrh, since internal medication of the uterine cavity is then rendered more easy of application.

The operation of incision is one worthy of the most careful study, and requires the greatest care in the performance of it, as well as in the after-treatment of the patient.

Solid Tumors of the Ovary.—Dr. Leopold contributes¹ a valuable paper on this topic. His résumé of the subject is drawn up after a careful examination of fifty-six cases. He considers that solid tumors of the ovary are very rare, forming about one and a half per cent. of all ovarian tumors. As a rule they retain to a certain degree the shape of the ovary, thus presenting a striking contrast from other ovarian tumors, which are very irregularly shaped. Their consistence varies from that which almost resembles a fluid to that which possesses extreme hardness. The external coat varies greatly in thickness, and upon this amount of thickening depends the relative rapidity of development of the tumor. In cases where the pedicle is short, the tumor may become wedged down between the uterus and the rectum. The presence of a tumor in the ovary rarely affects the uterus.

These tumors may be divided into fibroma, enchondroma, sarcoma, and carcinoma. The fibromas are either simple or complex. Enchondroma of the ovary is very rare, as is also ovarian sarcoma. As regards menstruation, it is possible for the catamenia to continue regularly even after both ovaries are removed, or when both are degenerated.

In the cases reported, ovariectomy was performed eight times, three of the operations resulting successfully. In one case Cæsarian section was performed, owing to a narrowing of the pelvis from the presence of an ossified fibroma.

Lupus of the Genitals.—In a clinical lecture at L'Hôpital de la Charité, Dr. Bernutz gives the following summary of this rare affection.² The disease is analogous to lupus of the face, the only differences being those due to the anatomical dissimilarity of the two regions affected, a dissimilarity, however, which greatly aggravates the prognosis of genital lupus. There are two forms of the disease: the tubercular and, what is rarer, the erythematous; but both varieties are usually found together. The mons veneris, the external surface of the labia majora, and the perinæum are the parts usually affected. The diagnosis is difficult, as many who suffer from the disease have such doubtful antecedents as to suggest the possibility of the case being one of a syphilitic origin. The color of the diseased part is dull red; its surface is covered with a layer of imperfect epithelium, and its tendency is to break out into ulcerations which in turn heal, leaving a series of cicatrices and ulcerations to be noticed on the same surface. It is the result, as a rule, of

¹ Archiv für Gynækologie, vi. 2.

² Archives de Tocologie, July, 1874.

bad air and poor living. The treatment should consist in an attempt to improve the general health, while portions of the growth are excised, and lint, dipped in tincture of iodine and an opiate preparation, is applied, so as to exert a constant pressure on the part. As internal remedies, arsenic, cod-liver oil, and iodine are advised.

Cystitis in Women. — Dr. J. B. Hicks,¹ in a valuable paper on the local treatment of cystitis in women, considers that but little dependence is to be placed on the efficiency of internal remedies, unless indeed an exception be made in favor of those medicines which are able directly to alter the acidity or alkalinity of the urine, as the case may be. Opium he considers as the most valuable remedy, not only because it relieves the pain which is so serious a symptom of the disease, but also because it has a decided effect in lessening reflex sensitiveness.

In all cases of severe acute cystitis, characterized by pain, by a frequent or constant desire to micturate, by severe scalding along the urethra during micturition, by a constant and intolerable bearing down, and by a urine loaded with mucus, pus, and blood, the first thing to be done is to ascertain the reaction of the urine. As a rule it will be found to be alkaline, although before pus appears in the urine it may be acid. If it is acid and ammoniacal, pass gently a gum-elastic catheter (open at its end instead of its side) into the bladder; draw off the urine; withdraw the catheter just without the neck, when the bladder is on the point of being emptied; then, by means of a syringe, wash out the bladder with warm water slightly acidulated with nitric, hydrochloric, or acetic acid (two drops of the acid to an ounce of warm water); inject until the patient expresses a desire to micturate, when the injection may be allowed to escape. This injection is to be repeated until the urine seems clear of phosphates and mucus; usually about half a pint of acidulated water will be found sufficient. Having thus washed the bladder clean, inject about a grain of morphia dissolved in an ounce of water. Withdraw the catheter, instructing the patient to retain the injection as long as possible. In all cases allow the catheter to rest just without the neck of the bladder, using force enough to carry the injection through the sphincter into the bladder. This treatment should be repeated twice daily. In cases where the urine is not markedly alkaline, the bladder may be washed out with a warm solution of permanganate of potash, instead of the acidulated water. After a few days of this treatment, a solution of chlorate of potassa (four grains to the ounce) may be used in place of the permanganate of potash, and afterwards the morphia solution. Where there is no blood in the urine, nor any constitutional effect experienced from the morphia, two grains may be used instead of one.

As the acute symptoms subside, more astringent washes may be used,

¹ British Medical Journal, July 11, 1874.

such as tannin (three grains to the ounce), or three or four drops of solution of perchloride of iron, the morphia injection being used subsequently. In cases where the urethra becomes very tender, it is well to omit the catheterization for a day or two. If after the main symptoms subside the urethra still remains tender, a bongie, smeared with tannin and dipped in gum-water before using, may be introduced with decided benefit.

In cases where the cystitis has become chronic, it is well to use a solution of nitrate of silver (from five to ten grains to the ounce) or perchloride of iron (ten minims to the ounce) before injecting the morphia. This application is to be repeated a week later.

In the acute stages the warm hip-bath and sponging of the genitals, with perfect rest in bed, are to be insisted on, and no alcoholic beverage whatever is to be allowed.

Dr. J. Goodman¹ believes that by far the best treatment of this class of cases is the insertion of a drainage-tube, thus preventing the retention of any urine in the bladder. The tube must be removed every three or four days for the purpose of cleaning it, which is best accomplished by placing it in acidulated water.

THE COMMISSIONERS OF LUNACY.²

THIS is the report of a special commission appointed in June, 1874, to examine the lunacy laws and the condition of the insane in hospitals. The body of the report is by Dr. Nathan Allen, of Lowell, upon whom all the labor has devolved. We pass over the statistical portion briefly.

Dr. Allen estimates the number of the insane in the State at over four thousand, of which two thousand two hundred and fifty-six are in hospitals, four hundred and thirty-eight in alms-houses, and the rest in private families. According to the National and State censuses, there is an increase of insanity in a ratio beyond the increase of population. This is most marked with the foreign element, instead of in the native class as we should expect from the writer's well-known views of the deterioration of the native stock. To account for this fact, he has to suppose change of climate and habits, as a very efficient cause of insanity. It seems unreasonable, however, to allow these causes to have such an immediate effect. It is more likely to be due to a forced or voluntary immigration of many partially demented or insane persons, who fail of self-support, or to a real inferiority in mental and physical stamina, as compared with the native class.

After discussing the problem of how to dispose of the large class of chronic insane, he concludes by recommending another special asylum like the one at Tewksbury. This is the class, however, which is best adapted to the cottage

¹ American Journal of Obstetrics, November, 1874.

² Report of the Commissioners of Lunacy to the Commonwealth of Massachusetts. 1875.

or family system, or the "farming-out" plan in use at Gheel and happily obsolete elsewhere. It is therefore to be supposed that Dr. Allen does not agree with his colleague, Wendell Phillips, who in a brief supplementary report recommends Gheel as a model. A hundred years ago, many paupers and lunatics were "let out" to New England farmers by town authorities, and every village was to some extent a Gheel. In Belgium, one village is made to do duty for all; but the system and its objections are the same everywhere.

It is unnecessary to go through the report in detail, as no new ground is broken, or new questions discussed, except in the last few pages, which contain arguments in favor of a permanent commission of lunacy. The first relates to the importance of creating "a guardian, protector, or defender for those whose natural rights or liberties have by interference of law been taken away or abridged." The second presents the advantages of having an agency, to "gather up the improvements made in hospitals at home and abroad, and also the most advanced views of men devoted entirely to the study and treatment of insanity, and bring this knowledge to bear upon the improvement of the insane, especially in our own State." Such a commission has existed for some time in Great Britain, and has been of great service in accomplishing the above desirable objects. There are some reasons, however, why a commission would be less required in Massachusetts. In Great Britain private asylums exist in large numbers, to which are sent all persons able to pay for such accommodation. These were formerly quite independent of official control or supervision, and in them are said to have occurred abuses utterly impossible in public asylums, like our State institutions. Except the one hundred and fifty patients at the McLean Asylum, Somerville, not forty insane persons are in private asylums in our State.

We have, moreover, the Board of State Charities, which, as their voluminous reports show, for ten years have been assiduously exercising the second named function of such a commission as Dr. Allen recommends. If they have not acted as "guardians, protectors, and defenders" of the insane, it was not for want of authority to visit and to investigate any case of suspected injustice. If the board as at present constituted cannot act as a permanent commission of lunacy, it would seem that a competent agent might be chosen, so as to avoid the appointment of another and separate supervisory board for the insane.

The report very properly urges on the State certain improvements and changes which hospital superintendents have for a long time advocated, namely, separate asylums for inebriates, criminal insane, and epileptics. It is probable, however, that with proper classification those epileptics who are mentally affected could be more suitably cared for, as at present, in hospitals for the insane. The appeal for better facilities for utilizing insane labor is also an echo of the hospital cry for "more land." The State has been remiss in neglecting the valuable suggestions scattered through asylum reports for years, and we cannot agree with Dr. Allen's nameless correspondent that no effort is made by superintendents to enlighten the public as to the proper treatment, and especially the prevention, of insanity. The steady advance in the knowledge of insanity and its treatment, the more humane and sympathetic management of the insane, the

improvements in hospital construction, have all emanated from the hospital itself, and not to any great extent from commissions or outside sources. It is ungenerous to ignore this fact, as is the fashion with certain reformers who have not Dr. Allen's general professional qualifications for the task of special commissioner. The public, be it said, never had so much confidence in hospitals or availed itself so readily of their advantages as at the present time, in spite of inherent defects, accidents, and abuses, and the disparagement of well-meaning philanthropy.

Dr. Allen makes no suggestions for changes in the insane laws. Mr. Phillips in his report, and Mr. Sewall in an appendix, do suggest radical changes. They would evidently recommend a code which, while adapted to expose exceptional injustice in commitments, should be applied with all the cumbersome details of legal machinery to every poor sick and insane man or woman who seeks personally, or through relatives, the privacy of an asylum. The latter, instead of giving the judge discretion whether to see a patient or not, would insist that he should see him or her, however sick or insanely apprehensive. To consider all the criticisms of the appendix would, however, take space which has been too far trespassed upon already.

T. W. F.

TRANSACTIONS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

WE recognize in this work¹ a notable contribution to the literature of sanitary science. The association under whose auspices the volume has been issued is still in its infancy, but it is an infancy of remarkable vigor and great promise. If the present publication is to be considered fair evidence of the plans and purposes of this enterprising body of sanitarians, we may confidently anticipate from them much excellent work which will reflect great credit not only on the individual members of the society but also on American zeal in the development of public hygiene; indeed, with such a witness before us, it is not unreasonable to predict that the leading place will presently be yielded to America in the fruitful prosecution of sanitary investigations.

The essays in this volume comprehend a wide range of topics, into the discussion of which the writers have brought originality, thoroughness, and especially earnestness. Of course it would be impossible to find equal merit displayed in all the forty-eight contributions here gathered; and it would be very strange if we did not come now and again upon statements and arguments which are not convincing. But making due allowance for the certain quantity of crude and fanciful theorizing and impracticable planning almost inevitable in the handling of a great subject as yet in the first stages of its evolution, we find the general character of the work to be eminently praiseworthy.

The extent of the field which these investigators have entered with such hearty zeal is shown by the following division of subjects:—

¹ *Public Health*. Reports and Papers presented at the Meeting of the American Public Health Association in the Year 1873. New York: Published by Hurd and Houghton; The Riverside Press, Cambridge. 1875.

1. Reports upon Physiological Subjects relating to Hygiene. 2. Reports upon Educational, Social, and various Physical Conditions relating to Hygiene. 3. Local and Domestic Sanitary Care of Contagious and Infectious Diseases; Vaccination. 4. Summary of Evidence and Local Reports upon Cholera as it has prevailed in the Mississippi Valley and elsewhere in America during the Year 1873. 5. Reports upon Yellow Fever. 6. The Principles and Practice of Quarantine in the Ports and Cities of the United States; Experience and Requirements. 7. The Sanitary Care and Utilization of Refuse of Cities; Disinfection and Disinfectants. 8. General Sanitary Laws; State and Local Organization for Sanitary Administration. 9. Water Supplies of Cities.

We have space for the mention of only a few of the many instructive papers in this volume; but we cordially recommend the entire work as of great value to medical men, and also to all who have the care of the public health in their official charge.

The opening address, by Dr. Stephen Smith, the president of the association, is marked by a high degree of hopefulness and enthusiasm. It deals with the potential side of public hygiene, indicating the results which, in the writer's view, sanitarians have in store for them as a kind of millennial reward for their labors. The author's drift of thought is as follows: The normal period of man's earthly existence, to which he has an inherent right under the laws governing his development, growth, and decay, is one hundred years; therefore death from other causes than old age, being accidental and unnatural, is preventable by human agencies. To be sure, the human race at present falls far short of this normal standard, and only three persons in every thousand attain their rightful period of life; but it is the lot of sanitarians to do very much toward restoring the natural condition of things — to prevent all mortality save such as comes at the end of a very ripe senility. Dr. Smith is not discouraged by any practical obstacles, immediate or remote, in the way of a realization of this result, but with evident sincerity declares his belief in man's ability, under hygienic teaching, "to lengthen or shorten at will his earthly existence." He would make sanitary knowledge more universal; he would have physiology, pathology, and public hygiene taught in the common schools and in the colleges, as well as in the strictly medical schools; and he would insist that State governments and the national government should aid the work by proper legislation and by the institution of special organizations and bureaus.

President Barnard, of Columbia College, presents a very able review of the germ theory of disease. He traces the history of the discussions and investigations concerning the doctrine of the propagation of germs in diseased tissues and touches incidentally on the merits of the chemical or fermentation hypothesis. Finally, after a careful and impartial analysis of the evidence on both sides, he concludes that neither the germ theory nor the fermentation theory is exclusively true, but that each has a range of action peculiar to itself. We admire the candor, not less than the learning, displayed in this able essay.

Dr. Austin Flint reviews the various theories of the etiology of typhoid fever, laying special stress on the relations of drinking-water to fever-propagation. As a general proposition, he maintains that the typhoid virus enters the system by the alimentary canal only, and that of all the possible vehicles

of the poison, contaminated drinking-water is the most frequent. He does not, however, accept Budd's hypothesis that the contagium of the fever resides only in the typhoid dejections; this doctrine will account for a certain proportion of instances but will not explain the isolated, sporadic cases which could have had no connection with other previous ones. As illustrating the close relation between contaminated drinking-water and autumnal fever, Dr. Flint relates the cases which occurred in 1843 in North Boston, and to which he refers in his well-known work on the Practice of Medicine. Certainly a better demonstration of the causation of typhoid could hardly be found. In discussing the etiology of enteric fever, Dr. Flint omits all mention of organic decomposition as a source of the disease; we believe that such decomposition, especially when it occurs under cover, is now recognized as one cause of the malady.

A considerable portion (one hundred and seventy-one pages) of the volume is devoted to detailed reports concerning the cholera epidemic of 1873. These reports are contributed by different observers and comprise an exhaustive and valuable account of the disease in its march across the country. Appended to these special papers are essays on the proper measures for the prevention and treatment of cholera, by Dr. S. Smith, and on the origin and spread of the disease, by Dr. J. C. Peters. A *brochure* by Prof. Max von Pettenkofer, containing practical suggestions as to the sanitary and curative agencies to be employed against cholera, is reprinted, and Dr. Harris adds some excellent conclusions respecting the causes of the disease and their removal. This whole series of papers is a most valuable contribution to epidemiology.

Dr. Vanderpoel, the health-officer of the port of New York, discusses the subject of quarantine with great clearness and comprehensiveness. The writer's experience entitles his opinions to much respect, although his liberal views of the practical operation of quarantine would hardly suit the conservative advocates of the strict conventional measures to prevent the importation of infection. Dr. Vanderpoel asserts that no formal, unvarying rules of quarantine are applicable to all cases alike, but that each port, each ship, each case of disease must be judged according to its own special character. The author very justly insists on the need of quarantine supervision of clearing as well as of entering ships.

Dr. Elisha Harris, the secretary of the association and the editor of these Transactions, has an instructive paper on State and local sanitary organizations. He points out the functions of such organizations and the immense influence they may have on the welfare of every community. He urges that registrars of vital statistics shall be in close relation with the sanitary authorities, if not subordinate to them. Finally, he shows that boards of health may do great good as sanitary educators, and as inspectors of public institutions, school-houses, reformatories, and the like. A summary of the laws under which State boards of health have been organized is given at the end of this paper.

The volume closes with an exceedingly interesting essay by Dr. Chandler, upon the sanitary chemistry of waters, with special reference to the water supply of towns and cities. The writer has here presented many facts concerning the sources of supply, the impurities ordinarily found, and the processes, natural and artificial, to insure purification. Dr. Chandler is not an alarmist

on the question of water-pollution; he believes that running streams can purify themselves of all contamination, by the spontaneous oxidation of organic matters received from sewers and surface drainage. He moreover asserts that there is small room for fear from the pollution of water-courses by the refuse of factories, for the diluting capacity of rivers is immense. Such conclusions should be reassuring at the present time in this vicinity, when so much is said about the pollution of Lake Cochituate by the sewage of Natick. Many negative facts may indeed be presented to show that the contamination of water supplies by organic refuse is not harmful ordinarily; but we are of the opinion that the majority of sanitarians would prefer to err on the safe side in practice, and would counsel ceaseless vigilance to prevent the pollution of rivers and lakes by sewage.

The volume bears the imprint of the Riverside Press. This statement of itself is sufficient intimation that the work is excellent in all the details of its mechanical execution. In addition to the clear type and accurate proof-reading, the numerous beautifully-finished maps, diagrams, and illustrations which embellish the pages are worthy of special mention.

F. W. D.

OPHTHALMOLOGICAL TRANSACTIONS.¹

SELDOM in a work of a little more than one hundred and fifty pages do we find a larger number of interesting papers. Among these essays is one on the Atropine Treatment of Acquired and Progressive Myopia, by Hasket Derby, M. D. The conclusions at which the writer arrives are, —

“That the emmetropic eye, through undue or disadvantageous use, acquires myopia much more frequently than has previously been supposed, and that such acquired myopia is very apt to be progressive, commencing with spasm of accommodation and going on, through a state of congestion and irritation, to the structural change characteristic of this error of refraction.

“That the paralysis of the accommodation by means of atropine, persisted in during a period of several weeks, and furthered by rest of the eyes, shaded glasses, and, in extremely aggravated cases, by local blood-letting, offers a reasonable prospect of preventing the progress of the myopia, in some instances of lessening its amount, and, in occasional recent and slight cases, of removing it altogether.

“That in cases of progressive myopia it is reasonable to expect positive results from an annual course of treatment similar to the above, carried on during those years which experience has shown to be most favorable to the advance of the myopia, thus enabling the patient to tide over a critical period. It is perhaps in its prophylactic action that the most importance is to be attributed to the atropine treatment.”

A table giving the results in thirty-six cases of myopia treated with atropine, accompanies Dr. Derby's report.

¹ *Transactions of the American Ophthalmological Society.* Tenth Annual Meeting, Newport, July, 1874. New York: Wm. Wood & Co.

Dr. B. Joy Jeffries reports the fact of a Foreign Body in the Globe only producing Sympathetic Trouble after Thirteen Years. The patient some thirteen years ago was struck on the right eye by a piece of spring which cut through the cornea. For two or three years his sight held good, then it gradually failed, and in some five months was gone. From that time till some eight weeks previous to May 6, 1874, there was no pain, but at the latter date marked sympathetic disturbance having come on in the other eye, enucleation of the right eye was performed and the patient perfectly relieved.

Dr. Arthur Matthewson, of Brooklyn, calls attention to a New Method of treating Blepharospasm. His patient was unable to open her eye on account of spasmodic action of the orbicularis. It occurred to Dr. Matthewson that if the lid could be kept elevated for a time the spasm might be overcome. Accordingly a band of rubber about a line in breadth, half a line in thickness, and an inch in length, was attached by one end to the surface of the upper lid near its lower edge, at the middle of its horizontal length, a strip of isinglass plaster, notched so as to adapt itself accurately, being applied across the band, and the whole covered with collodion and allowed to dry till firmly adherent. Then the band was stretched to an inch and a half, so as to elevate the lid moderately, and fastened to the forehead in the same way. The band was kept in place twelve days, when it was found that the blepharospasm had been entirely overcome.

Dr. Hay, of Boston, and Dr. Noyes, of New York, call attention to instruments of their invention.

Drs. Wadsworth, Jeffries, and Matthewson report cases of herpes zoster ophthalmicus. Dr. Matthewson's cases were treated by electricity.

The report also contains papers by Drs. Thompson and Norris, of Philadelphia; Dr. Murdoch, of Baltimore; Dr. Green, of St. Louis; Dr. Prout, of Brooklyn; Drs. Loring, Bull, Agnew, and Althof, of New York; Dr. J. F. Noyes, of Detroit.

VIVISECTION.

In regard to the importance of experimentation on animals as a means of advancing our knowledge of medical science, there is but little difference of opinion among members of the medical profession. The question is one, moreover, with which medical men alone are competent to deal, for they can judge of the importance of the question which the experiment is intended to solve, and estimate at its true value the amount of suffering which it may occasion the animal. It unfortunately happens, however, that the laity, though possessing no means of reaching an intelligent decision, is uncommonly ready to express its opinion on this subject. It has even happened that societies for the prevention of cruelty to animals (organizations which, when properly controlled, may confer incalculable benefits not only upon the brute creation but also upon the human race) have invoked the majesty of the law to punish investigators in this branch of medical science.

An account of the persecution to which Professor Schiff, of Florence,

was subjected by ignorant and zealous "philozoists," and the triumphant refutation of the charges made against him, have been already presented to our readers.¹ A still more striking example of this sort of misdirected energy is afforded by the public prosecution at Norwich, England, of Dr. Magnan, of Paris, and several English physicians, "for that they . . . did unlawfully ill-treat, abuse, and torture certain animals — to wit, two dogs — contrary to the statute." The facts in the case are briefly these. At the meeting of the British Medical Association in August last, M. Magnan, of Paris, desiring to present to the medical profession of England the results of his investigations into the power of absinthe to produce epilepsy, obtained permission of the executive committee to illustrate the subject by injections of alcohol and absinthe into the veins of dogs. The result of the experiment was that the dog which had received the dose of alcohol became unconscious for a period of several hours, after which complete recovery took place; while the dog into whose veins absinthe had been injected had an epileptic attack which proved fatal, neither of them having apparently suffered any pain beyond that produced by the incision over the femoral vein. The principal witness for the prosecution, which was conducted under the auspices of the Royal Society for the Protection of Animals, was Mr. Tufnell, President of the Royal College of Surgeons in Ireland. This gentleman testified that he protested against the experiment as cruel and unnecessary, at the time of its performance, and actually cut one of the dogs loose from the board on which it was secured, with the remark, "I am a sportsman as well as a surgeon, and I will not see a dog bullied." Unfortunately no decision was reached in this case, as the prosecution fell through from lack of evidence that the defendants took any part in the performance of the experiment.

To prevent the repetition of such occurrences, it is only necessary that an enlightened public opinion on the subject should be formed; that it should be thoroughly understood how really insignificant is the pain inflicted in most physiological experiments, and of what vast importance are the results to which such investigations lead. As a means of public enlightenment on this important subject, we welcome Professor J. C. Dalton's little volume on "Experimentation on Animals as a Means of Knowledge in Physiology, Pathology, and Practical Medicine." In this work the author describes, in concise and untechnical language, first, the character of physiological experimentation, particularly in regard to the amount of pain inflicted; secondly, the necessity of such investigations as the only means by which we can hope to increase our knowledge of physiological laws which form the foundation of medical science; and thirdly, the results already accomplished in this field of scientific research. In the last two chapters are to be found resolutions of various medical societies and testimony of distinguished men and experts bearing upon the question. The book is to be strongly recommended to all who desire to form an intelligent opinion on this subject.

While favoring vivisections, we do not lose sight of the fact that unnecessary pain has been inflicted by experimenters, and may be again inflicted by those who have no regard for the sufferings of animals. The laboratory is as

¹ Boston Medical and Surgical Journal, August 13, 1874.

liable to abuse in this respect as the hospital ward or the operating theatre. Instances of such abuse in this country are, however, in either case, happily rare. Our physiologists are as humane as any other class in the community, and are fully alive to the importance of this question. We think, therefore, that the matter may be safely left in their hands.

THE REMEDIAL USE OF WATER.

AN interesting and instructive article on this subject has recently been written by Dr. Austin Flint, of New York, and is published in the *American Practitioner* of January, 1875. The article is especially designed to call attention to the researches of Dr. James Currie, who during the last decade of the eighteenth century was an ardent advocate for the use of water in febrile affections. As our readers well know, cold-water baths as a means of diminishing preternatural heat have been employed of late, particularly by German physicians. Its advocates adopt this treatment at the present time purely for an antipyretic effect; but Currie did not regard the remedial use of water exclusively in this light. He considered the sudden and powerful impression produced upon the nervous system as especially important, and therefore chose affusion as the mode of its employment. Currie's publications consist of a duodecimo of four hundred and thirty pages, comprising two volumes in one. The first volume appeared in 1797, and the second several years later. In his writings, Currie made no claim to having originated the method of treatment which he advocated, but states that he was led to make trial of it from the publication of an article by Dr. William Wright, in the *London Medical Journal* for the year 1786. Currie resorted to Dr. Wright's plan on the occasion of the prevalence of enteric fever in the Liverpool Infirmary, and was so well satisfied with the results that he continued to make use of the affusion of cold water in cases of low contagious fever in which the strength was not too much exhausted, and he preserved a register of one hundred and fifty-three cases in which the cure was chiefly entrusted to the remedy. Later he recorded only the cases in which it proved unsuccessful. Chapter III. contains an account of a continued fever which prevailed in a regiment of troops in Liverpool. The epidemic "extended to fifty-eight persons in all, of whom thirty-two went through the regular course of the fever, and in twenty-six the disease seemed to be cut short by the cold affusion. Of the thirty-two cases, two died." The water employed on this occasion was taken from the river Mersey. It was of a temperature of from 58° to 60° F., and contained in solution about a thirty-second part of sea-salt.

In Chapter IX. Currie discusses the employment of cold water in small-pox. Used in six or seven cases during the fever which precedes the eruption, the severity of the symptoms immediately abated, "and the disease assumed a benignant form." Further on in the work he claims to have found the cold bath a most useful remedy in the convulsions of children, whether originating in teething or otherwise. He also recommends it in hysteria, and details a

case of acute mania brought on by drinking, where the patient was hurled headlong into the bath and came out calm. The treatment was repeated with benefit as often as the state of insanity returned. Currie never found the cold bath to be of service in chorea or epileptic paroxysms.

His observations were not limited to cold affusion. He employed also affusion of tepid water, and regarded the latter as "applicable to every case of fever in which the cold affusion is recommended, and those may receive much benefit from it whose fears or whose feebleness deter them from that energetic remedy." He did not find its effects so permanent as those of cold affusions. He also used affusions of cool water, of a temperature of from 87° to 75°. He regarded sponging with cold or warm vinegar or water as less beneficial than the cold or tepid affusion, and in many cases as less safe, "for," to quote his words, "the system will often bear a sudden, a general, and a stimulating application of cold when it will shrink from a slow and successive application."

He preferred sea-water, or water to which salt is added, at a temperature of from 40° to 50° F. His method was to pour over the naked body a bucketful, or from four to five gallons, the patient being immediately dried with towels and replaced in bed. The immediate effects were the reduction of the temperature of the body frequently to its normal standard, a diminution of the pulse often from twenty to forty beats per minute, with relief of headache and other symptoms.

It is interesting to know that Currie fully recognized the importance of measuring the heat of the body with the thermometer. He recommended that the instrument be introduced either under the tongue or into the axilla of the patient. He had curved and self-registering instruments, made very similar to the clinical thermometers of the present day.

In his second volume, Currie had nothing to detract from the accounts he had previously given of the efficacy of the cold-water treatment. He states that in 1801 he used affusions with less striking advantage in continued fever than on former occasions. He lost, however, but two cases out of twenty-three. "As extensive as my employment of the affusion has been," he says, "I have never heard that it has suggested even to the fears or prejudices of others a single occasion of imputing injury to the remedy." He conjoined with it remedies of the most simple kind — saline draughts, doses of laudanum, mineral acid drinks, milk, gruel, and occasionally wine.

Dr. Flint states that the cases of continued fever treated by Currie probably embraced examples of both typhus and typhoid fever, and perhaps acute pneumonia.

Currie was a strenuous advocate for the employment of the cold affusion in scarlet fever. The vivid account he gives of his shutting himself up with his two boys when they were attacked with the disease, and with his own hands assiduously plying the cold affusions till he considered them out of danger, shows the faith he had in the remedy, and the zeal which a father's love prompted him to put forth in its employment. The heat in the eldest rose to 109°, in the youngest to 108°, and the pulse in each to upwards of 150. In thirty-two hours the first had the affusion fourteen times — eight times cold, twice cool, and four times tepid. Twelve affusions sufficed for the youngest, of which

seven were cold. On the morning of the third day they were both evidently safe.

Dr. Flint shows the points of similarity and contrast when recent views are compared with those of Currie. According to both the older and the more recent theories the reduction of the preternatural heat of the body is the main object. In recent views this is the only aim, but Currie held that an effect was produced, in addition to the withdrawal of heat, by a curative impression which he did not undertake to explain. In the mode of employment there is a contrast between affusion and the bath. In both, the importance of thermometry in determining the indication for and the effect of the treatment is alike appreciated. Currie's researches did not extend to inflammatory affections, while recent advocates seek for the abstraction of heat alike in symptomatic and in essential fevers. Currie aimed to cut short fevers, and his success in this respect seems to have been remarkable. Modern treatment has not so much reference to this object as to the diminution of the intensity of the disease and of danger.

Dr. Flint has to a limited extent made use of the treatment by the wet pack, and with advantage in continued fever and scarlatina, and to a larger extent in cases of insolation, or thermal fever. His method of employing the wet pack is to envelop the naked body in a sheet saturated with cold water, and to place the patient on blankets covered with india-rubber cloth; cold water is to be applied over the body from a sprinkling-pot at intervals of a few minutes, and the treatment to be kept up according to the effects on the temperature, pulse, and other symptoms. He regards the pack, when employed thus, to exert all the advantages of the bath.

The article closes with some remarks on the use of water internally as a remedial measure.

MEDICAL NOTES.

—The regular monthly meeting of the Suffolk District Medical Society will be held on Saturday next at 7.30 P. M. There will be a report of the Committee on Rooms, and an election of delegates to the American Medical Association. Dr. Bixby will report a case of colloid degeneration of both ovaries.

—The Board of Health of New York have appointed Drs. Edward Curtis and Thomas E. Satterthwaite, of that city, to investigate the subject of diphtheria, with a view to determine more nearly, if possible, the character of the disease and the best means for contending with it.

—Miss Alice Vicary, the first and only registered lady pharmacist in England, has just passed, in company with Mrs. Kingsford, the first year's examinations of the School of Medicine of the University of Paris.

—By royal decree, female students in Sweden are to be admitted on the same terms as males to all the examinations in the universities, except those for the licenses in theology and law.

—In consequence of a fall of snow and sleet there were two hundred and sixty accidents in Paris on New Year's evening.

— Dr. J. M. Toner, of Washington, D. C., recommends, in the *American Medical Weekly*, the following: "Have a large rubber stocking, or boot if you choose to so call it, made double or in duplicate, the inner one the smaller, but joined at the top to the outer one, so that between the two there will be formed a sac. This boot can be readily drawn on the foot like a loose stocking, and then the interspace between the layers is to be filled with warm water. The pressure of the water will apply the surface of the inner boot, which should be lined with cotton or woollen cloth, to all parts of the limb as high as you choose to have the boot come, and thus impart a continuous warmth to the foot and limb. The outer boot must be so made as to allow of the water being drawn off when it becomes cool, by means of a stop-cock and tube, and additional warm water introduced without any disturbance to the patient and but little displacement of the bed-clothing."

— Frequent deaths from overdoses of chloroform continue to be reported. What is an overdose? In fatal cases it is usually stated that but a very small quantity has been administered — a drachm, or even a few drops only.

— Dr. Gesualdo Clementi, of Sicily, was called on August 15, 1874, to a woman who had been suffering for a fortnight from cough and hæmoptysis. She had always previously enjoyed good health, but was now quite aphonic, and suffered from attacks of severe dyspnoea. Physical examination failing to discover anything abnormal about the chest, the laryngoscope was employed, and it was found that the opening of the glottis was occupied by a horse-leech, which was attached to the right arytenoid cartilage by its oval disk. Most of the body was hidden beneath the vocal cords. Numerous attempts were made to extract it on the first day of its discovery, but it was only on the next day that the leech was removed by the use of a pair of forceps with small recurved teeth. A good deal of force was employed in its extraction. This is the third case in which a leech has been discovered in the larynx, and extracted by the help of the laryngoscope.

— Dr. Madison Marsh, of Port Hudson, La., in a paper in the *Medical and Surgical Reporter* of January 16, 1875, states that in a large and extensive practice of over twenty-five years, in the whole round of toxicological agents and virulent poisons he has not witnessed so many fatal cases, by accident or design, as have come under his notice since the introduction of chloral hydrate. Of the many fatal cases which have come to his knowledge he reports four at length, where during the past year patients suddenly died from the use, he is firmly convinced, of chloral hydrate. In strong language he warns against the incautious use of this agent.

— Messrs. J. T. Brown & Co. inform us that through the courtesy of Messrs. S. Maw, Son, & Thompson, of London, they have received a specimen of the new drug jaborandi, which is said to possess powerful sudorific and sialogogue properties; they will be happy to show the sample to the readers of the JOURNAL, and to furnish such information as they have in regard to it.

— The medical profession is well represented in the Italian parliament, in which the last elections have placed twelve physicians and surgeons, and one accoucheur.

— A good instance of the successful transfusion of blood is recorded in *L'Imparziale*, No. 11, 1874. The operation was performed by Professor Caselli, for Professor Livi, in the case of a girl affected with lipomania and stupor, who was unable to articulate a single word, or to perform any at all complex movements, and who presented the general appearance of a cataleptic. The blood employed was taken from the carotid of a sheep, two ounces flowing from the vessel every fifteen seconds, and allowed to pass through a tube directly into the vein of the patient. After flowing for this space of time, its further ingress was stopped. In the mean while the patient appeared to be revived. She improved in appearance, made a deep inspiration, gained color, spoke a few words, and made movements. These effects were persistent, and the patient made a good recovery.

— Dr. Evan Pierce, J. P., county coroner and five times mayor of Denbigh, has lately been the recipient, says the *Lancet*, of an honor which falls to the lot of but few living men. The foundation stone of a column to be erected in Denbigh by public subscription in honor of Dr. Pierce was laid. The column is to be ninety feet high, surmounted by a statue of the doctor, and is to cost £1000. A procession, consisting of all the influential inhabitants, with the fire brigade, and other public bodies, paraded the town prior to the ceremony, at the conclusion of which a large and distinguished party were entertained at a banquet by Dr. Pierce.

SURGICAL OPERATIONS AT THE MASSACHUSETTS GENERAL HOSPITAL.

[SERVICE OF DRS. BIGELOW AND CABOT.]

Operations were performed under ether in the following cases during the week ending February 6:—

1. Stricture of the urethra. 2. Strangulated femoral hernia. 3. Hare-lip.
4. Injury of foot. 5. Felon (three cases). 6. Necrosis of humerus. 7. Fistula in ano. 8. Talipes varus. 9. Fatty tumor of arm. 10. Supernumerary toe.
11. Necrosis of femur. 12. Wen. 13. Abscess (two cases). 14. Hematocele.

1. *Stricture of Urethra.*—The patient was a middle-aged man, who thirteen years ago had gonorrhœa; since then the urethra had gradually diminished to the size of a No. 6 elastic catheter. Five days after admission he was etherized, and the stricture ruptured by Voilemier's divulsor. During the following month the stream again decreased in size, and quite recently the integument of the perinæum became red and somewhat tender, the scrotum being involved with black spots upon its surface. A large catheter was passed and free incisions were made to relieve tension.

2. *Strangulated Crural Hernia.*—The patient was a woman sixty-three years old, and the hernia had existed fifteen years. Symptoms of strangulation commenced twenty-four hours before she entered the hospital, the hernial tumor being of the size of a hen's egg. Dr. Bigelow cut down upon the intestine, which was strangulated at a very narrow orifice and quite discolored; it

was also adherent to the neck of the sac. After being carefully detached the bowel was returned to the peritoneal cavity; but the patient died of peritonitis the following day.

4. *Injury of Foot, with Laceration of the Soft Parts, Extensive Extravasation of Blood, and Fracture of Phalanges, by Railroad Accident.* — It was impossible to say how much of this foot could be saved, but the patient being a young and healthy one, Dr. Bigelow thought it better to wait and be guided by a line of demarcation at a future time. The foot with the ankle was tensely distended by coagula, and was bleeding at several small orifices. A sound entered beneath the integuments passed readily in all directions, the skin being everywhere detached from the foot and ankle. There was reason also to fear that the ankle-joint was injured. The important thing was to evacuate the imprisoned coagula and relieve the tension of the integuments of the foot by free incision, with the view of preventing their mortification. This patient has since done well, losing by mortification only two toes and about one quarter of the integuments of the foot, which may, on that ground, require partial amputation. A large abscess has been opened over the inner ankle, but the joint seems sound.

In contrast with this case, a middle-aged man entered the house a few days after, with a compound fracture of the leg, which was largely distended with blood, and so crushed as peremptorily to require amputation, which he persistently declined. Acute mortification ensued the next day, with dusky spots high on the thigh. It was then too late to operate and the case terminated fatally.

7. *Fistula in Ano.* — Dr. Bigelow spoke of the importance of making the incision correspond as far as possible to the direction of a radius of which the anus is the centre. Such incisions heal faster than when parallel to the margin of the anus or terminating in it with an oblique and pointed flap.

H. H. A. BEACH, M. D., Surgeon to Out-Patients.

LETTER FROM PHILADELPHIA.

MESSRS. EDITORS, — Until recently, students of all the medical schools of Philadelphia, of whatever ilk, have been allowed to attend the medical and surgical clinics at the Philadelphia Hospital. Each student, if he attended these clinics for a certain length of time, was furnished with a certificate to that effect. It was found, however, that some of these students (notably of the genus homœopath) after receiving their certificates retired to the country, or elsewhere, and, using these documents in lieu of the regular diploma, began practice. Hence the board of managers issued orders to the effect that no more homœopathic students should be admitted to the clinics, whereat, with great fracas, uprose the homœopathic professors and demanded their rights! Whereupon the board of managers takes the bit in its teeth and commands that no more certificates be issued to any student whatsoever; which will cause no special loss to anybody other than the knaves who attempt to do honest men's work without license.

Homœopathy has its charms. For example, a well-known gentleman was carried to his home, the other day, suffering from intense pain through both lungs. He was a believer in homœopathy, and one of its disciples was called. He prescribed his tincture, and then sat chatting with his patient until the latter fell back and died. Meanwhile the members of the patient's household, non-believers in Lilliputian medicine, sent for a regular practitioner, with the word that a gentleman needed to be *bled*. (Out of the mouths of babes and sucklings may these astute homœopathists learn wisdom!) The physician arrived too late. The robust man was dead, and the homœopath had complacently informed the family that he died of *cerebral apoplexy*! The physician last called was horrified to find that the only effort toward relief had been offered in the shape of *two goblets of water and a teaspoon*. No cupping, no blister, not even a cataplasm had been applied to the agonized chest of the sufferer. Even though the patient was gone, there were evidences that he died of congestion of the lungs, which proved to be the case. Verily this was an instance which justified unparliamentary language. *Vive Homœopathy!*

We are patiently waiting for the result of a protest from many of the physicians of Philadelphia against the establishment of a stock-yard and abattoir on an immense scale on the western bank of the Schuylkill, but quite near the city. An expert from Chicago (Dr. Rauch) was invited to give his opinion touching the probable effect of such an establishment. He thinks that during the prevalence of certain winds the death-rate at the University and Blockley hospitals would be increased by the effluvia from the slaughter-house, and that when other winds prevailed, the city proper would be affected; and finally, since the current of the Schuylkill on its western side is very sluggish, Dr. Rauch argues that the offal, blood, and other débris which would be thrown into the river would not be carried away, but would decompose and render the stream an unhealthful companion to the city. It is this communication of Dr. Rauch's which the signatures of the physicians indorse. What the Pennsylvania Railroad Company will conclude is now the unanswered question. Apparently they mean to establish the abattoir in spite of this medical protest, which bears the names of scores of the leading physicians of Philadelphia. Personal interest outweighing soul in a large corporation, we may anticipate obstinacy on the part of the Pennsylvania Railroad Company.

The faculty of the university medical school, still lacking the funds necessary to the completion of their plans, are moving for another grant from the legislature, Dr. Pepper as usual being the active spirit. The managers ask for \$125,000, and promise to raise a like amount by subscriptions. It is to be hoped that the legislature will be renewedly generous. The Jefferson College subscription fund has already reached \$100,000, which entitles the college to an equal sum from the State. As yet, I believe, no move has been made toward an application of the funds.

Our streets have been sweetened by a larger proportion of snow and ice than usually falls to the share of Philadelphia at this season. The city has frequently been a glare of ice, and sidewalks in many localities have been so shamefully neglected that the surgical records of the Pennsylvania Hospital have been swelled by scores of fracture cases. The sidewalks about the city

parks have been simply untouched, it being above the dignity of the street commissioners to do more than draw their salaries and misuse appropriations.

The medical fraternity of the city recently enjoyed a quiet smile over a consultation which was called in a case of pneumonia, one of the physicians called being a distinguished surgeon and the other a leading obstetrician. It may be that the susceptibilities of the specialists are sadly wounded. Much of the ancient professional dignity still clings to the physicians of Philadelphia, and specialties and other infringements upon the old régime have many enemies. But in the matter of vehicular turn-outs there are now seen the most startling innovations in shape of trotting-wagons, "fancy matched pairs" in red-wheeled buggies, bright bays of lively disposition driven in pairs with breastplate harness, etc. John Knox stoutly asserted, "The devil shan't have all the good tunes," and forthwith introduced inspiring melodies into the church service. In these spirited medical turn-outs perhaps we see another application of the same idea. Apropos of doctors' carriages, old Dr. Condie, of Philadelphia, still living, who wrote a book on "Diseases of Children," and who would never keep a carriage in spite of his large practice, is made responsible for this *mot*: "If a doctor drive one horse, it indicates physical weakness; if he drive two, mental weakness."

Interesting experiments were performed, a few days since, upon the body of Heidenblut, the murderer, directly after his remains were removed from the gallows. Those upon the laryngeal nerves were instituted at the request of Dr. Weir Mitchell, and were skillfully performed by Dr. W. W. Keen with the assistance of Dr. Carl Seiler. In the *Medical Times and Gazette* for December 19, 1874, was published a paper read by Dr. George Johnson before the Royal Medical and Chirurgical Society of London, to demonstrate and explain the theory that bilateral spasm and bilateral paralysis of the larynx may result from the pressure of an aneurism, or other tumor, upon the pneumogastric nerve of one side only. Reference was made to two cases of aneurism, one of the innominate, one of the aorta, which caused bilateral palsy of the larynx during life. After death, however, it was found that the vagus of one side only was involved. In both cases the laryngeal muscles of both sides were paralyzed, and Johnson's theory was that this was due on one side to direct pressure; on the other to reflex action. Dr. Johnson further said that pressure on one recurrent nerve (which is supplied with efferent motor fibres only, originating in the spinal accessory) will cause direct unilateral paralysis of the larynx, but cannot cause bilateral spasm or bilateral palsy. On the other hand, pressure upon the vagus involving its afferent fibres may cause both spasm and palsy of bilateral character. The reason for this bilateral action he considered to be the intimate connection between the nerve-nuclei of the two sides, thus according with the views of Dr. Broadbent. Dr. Lockhart Clarke has demonstrated that three sets of commissural fibres connect the nerve-nuclei of the origin of the spinal accessory, and this fact was also used by Dr. Johnson in support of his theory. At the same meeting Dr. Powell stated that he had obtained like results in the dog, but called attention to the difference which exists in different animals, and added that faradization of one recurrent in the cat produced abduction of both cords. "Dr. John Reid," said Dr. Powell,

"produced bilateral spasm in the larynx of the dog, by galvanizing one recurrent." Some years ago Dr. Weir Mitchell discovered a remarkable chiasm in the laryngeal nerves of the turtle, and also experimented upon the cat and rabbit, but without result. He did not examine the dog. These statements of the English physicians, therefore, prompted his proposal that Dr. Keen should aid him in new experiments to determine these assertions in case of the dog. A few days later Dr. Keen was invited to attend the execution of Heidenblut, and thereupon came the idea of making these experiments upon the human body directly after death.

Within thirty minutes after the execution of the criminal, Dr. Keen carefully dissected out the pneumogastric of one side, insulated the nerve by means of strips of pure rubber cloth, and then applied the two wires of the battery directly to the nerve. Meanwhile Dr. Seiler attempted to watch the action of the larynx in the ordinary manner; but the hyoid bone of the subject had been fractured, thus closing the pharynx. Besides this the throat of the dead man was occluded by a tenacious mucus, so that it was impossible to see the larynx. Dr. Keen therefore made an incision just above the thyroid cartilage, large enough only to admit the mirror, and recommenced the faradization of the nerves. I should remark that the vertebræ were neither fractured nor dislocated. This is the third case of judicial hanging in which Dr. Keen has verified this condition of the spinal column. The sterno-cleido-mastoid muscle of the right side had, however, been completely torn asunder by the pressure of the rope, the sheath being the only bond of union. Both vagi were apparently uninjured, and the recurrent nerves had been untouched by the rope. Upon re-applying the current the vagus responded perfectly, but only one side of the larynx was affected. In spite of a forty cell current and in spite of the afferent fibres which this nerve contains, no other result could be produced. Bilateral action of the vocal cords by galvanization of one recurrent nerve could take place only in case a chiasm existed between the laryngeal nerves (because this nerve contains only efferent motor fibres), and no such chiasm was found: only one nerve responded. Except it be that in this case the nerve centres were injured by the pressure of the rope, thus preventing a transmission of the current from one set of nerve-nuclei to the other, these results would seem to refute the assertions of Dr. Johnson.

Dr. Keen next galvanized the phrenic. The nerve did not respond. He then applied the current to the intercostal muscles and proved most satisfactorily that the internal intercostals are muscles of inspiration and that the external intercostals are muscles of expiration, the former lifting the ribs, the latter depressing them. This manner of testing these muscles, which Dr. Keen was probably the first to attempt, will undoubtedly decide the question as to their real function, touching which there has been so much confusion of opinion. He also tested some of the facial muscles in relation to the part they take in expression, and found that the pyramidalis nasi, as stated by Darwin, is a direct antagonist to the occipito-frontalis.

Dr. Keen read a paper giving the results of his experiments upon Heidenblut, before the College of Physicians on Wednesday evening last. The details will therefore soon be published. Dr. Keen closed his paper by calling attention

to the important results which this new method of investigation, namely faradization of the muscles of the recently dead, promises to yield.

"In the living body it is almost impossible to obtain the action of a single muscle, especially in the face, where the emotions, as pain, amusement, etc., involuntarily arouse the action of other muscles. In the recently dead the results will be far more accurate, and therefore to the anatomist, physiologist, and artist are of the greatest interest and importance."

UNGENANNT.

PHILADELPHIA, February 5, 1875.

BOOKS AND PAMPHLETS RECEIVED.

A Practical Treatise on the Medical and Surgical Uses of Electricity. By George M. Beard, A. M., M. D., and A. D. Rockwell, A. M., M. D. Second Edition, Revised, Enlarged, and mostly Rewritten. New York: William Wood & Co. 1875. Pp. 794. (For sale by A. Williams & Co.)

Public Health. Reports and Papers of the American Public Health Association in the Year 1873. New York: Published by Hurd and Houghton. The Riverside Press, Cambridge. 1875. (From the Publishers. For sale by Noyes, Holmes, & Co.)

Transactions of the American Ophthalmological Society. Tenth Annual Meeting, Newport, July, 1874. New York: William Wood & Co.

Compendium of Children's Diseases: a Handbook for Practitioners and Students. By Dr. Johann Steiner. Translated from the Second German Edition by Lawson Tait, F. R. C. S. New York: D. Appleton & Co. 1875. Pp. 408. (For sale by A. Williams & Co.)

Annual Report of the Surgeon-General of the Commonwealth of Massachusetts for the Year ending December 1, 1874.

Report of the Commissioners of Lunacy to the Commonwealth of Massachusetts. 1875.

A Series of American Clinical Lectures. Edited by E. C. Seguin, M. D. Vol. I., No. 1. On the Disease of the Hip-Joint, by Lewis A. Sayre, M. D. New York: G. P. Putnam's Sons. 1875.

Pulmonary Tuberculosis, its Pathology, Nature, Symptoms, Diagnosis, etc. By Addison P. Dutcher, M. D. Philadelphia: J. B. Lippincott & Co. 1875. Pp. 375. (From A. Williams & Co.)

Dental Pathology and Surgery. By S. James A. Salter, M. B., F. R. S., Dental Surgeon to Guy's Hospital. New York: William Wood & Co. 1875. Pp. 399. (From A. Williams & Co.)

On the Treatment of Pleurisy. By John W. Corson, M. D. New York: William Wood & Co. 1874. Pp. 31.

A Handbook of Therapeutics. By Sydney Ringer, M. D. Fourth Edition. New York: William Wood & Co. 1875. Pp. 632. (From A. Williams & Co.)

Neuralgia in and about the Ear. By J. Orne Green, M. D. Reprinted from the Transactions of the American Otological Society. 1874.

WEEKLY BULLETIN OF PREVALENT DISEASES.

THE following is a bulletin of the diseases prevalent in Massachusetts during the week ending February 20, 1875, compiled under the authority of the State Board of Health from the returns of physicians representing all sections of the State:—

Diseases of the respiratory organs (bronchitis, influenza, pneumonia) are universally prevalent throughout the State.

In addition to the above general statement, the weekly reports furnish information of the local prevalence of certain diseases as follows:—

In Berkshire: croup and diphtheria prevail in and around Pittsfield.

In Worcester County: measles, diphtheria, scarlatina, and whooping-cough. Small-pox continues in the Blackstone Valley, but is not reported elsewhere.

In Middlesex and Essex: measles, rheumatism, scarlatina, and whooping-cough have quite an extensive prevalence.

In the Metropolitan section: measles has increased in prevalence since last week, and "roseola" is reported. Diphtheria and rheumatism have also extended. Scarlatina is less prevalent.

In the Southeastern counties: croup, measles, whooping-cough, and rheumatism are prevalent.

A comparison with the report of last week shows that measles and diphtheria have increased; influenza, bronchitis, pneumonia, and rheumatism remain as before; all other diseases have subsided.

Measles has its field of maximum prevalence in Suffolk, Middlesex, and Essex; scarlatina in Worcester; diphtheria in Berkshire.

F. W. DRAPER, M. D., Registrar.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING FEBRUARY 13, 1875.

	Estimated Population.	Total Mortality for the Week.	Annual Death-rate per 1000 during Week.
New York	1,040,000	594	30
Philadelphia	775,000	361	24
Brooklyn	450,000	240	28
Boston	350,000	197	29
Providence	100,000	48	25
Worcester	50,000	14	15
Lowell	50,000	17	18
Cambridge	44,000	41	48
Fall River	34,200	23	35
Lawrence	33,000	14	22
Springfield	33,000	4	6
Lynn	28,000	23	43
Salem	26,000	10	20